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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/511,639	11/28/2005	Jung-Won Kang	YOM-0121	6337

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EXAMINER	
OJURONGBE, OLATUNDE S	
ART UNIT	PAPER NUMBER
1796	

NOTIFICATION DATE	DELIVERY MODE
01/21/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/511,639	KANG ET AL.	
	Examiner	Art Unit	
	OLATUNDE S. OJURONGBE	1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 November 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,4 and 6-20* is/are pending in the application.

4a) Of the above claim(s) *10-18* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1, 4, 6-9 AND 19-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. The amendment filed on 11/04/2008 has been entered. Claims 1, 4, 6-20 are pending in the application of which claims 10-18 are withdrawn from further consideration.

2. The 112 rejection of claims 1-9 is withdrawn.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. **Claims 1, 4, 6-9, and 19-20** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites ".(a) oxidized hydrosilane prepared by oxidizing hydrosilane oligomer represented by the following chemical formula 1 or cyclic hydrosilane oligomer represented by the following chemical formula 2....."; the compound (a) is referred to as an oxidized hydrosilane, prepared from one of the hydrosilane oligomers as shown. If the oxidizing results in the formation of -OH groups in place of the -H groups (as applicants assert on pages 5/7 of their remarks), then it would appear that the oxidized product is, in fact, an oligomer (actually a siloxane as shown by the formula) rather than a silane per se. The claim is drawn to a silane, but the reactant by which it is prepared would indicated that it is a siloxane oligomer as shown (m is 1 or greater). Thus it is unclear what the starting compound in (a) is.

Dependent claims 4, 6-9 and 19-20 are rejected for the same reason.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. **Claims 1, 4, 6-9 and 19-20** rejected under 35 U.S.C. 103(a) as being unpatentable over **Nakashima et al (WO 00/12640, US 6, 639,015** is used for ease of citation).

Regarding **claims 1, 4, 6-7, 19 and 20**, Nakashima et al teaches a coating liquid for forming a silica-containing film, said coating liquid comprises a polymer composition mainly constituted by components that include: (i) polysiloxane; said polysiloxane being a reaction product between fine particles of silica and a hydrolyzate of at least one alkoxysilane represented by formula (I) (abstract).

Nakashima et al further teaches obtaining the polysiloxane by: (a) mixing the fine particles of silica and at least one alkoxysilane represented by the formula (I) in an organic solvent, and (b) then performing hydrolysis reaction of the alkoxysilane under the presence of water and catalyst (col.5, lines 45-56).

Though Nakashima et al does not teach a method for preparing organic silicate polymer of the instant claim, since Nakashima et al teaches the R of the alkoxysilane of the invention to include hydrogen and X as hydrogen atom, a fluorine atom, an unfluorinated or fluorinated alkyl group of 1 to 8 carbon atoms, an aryl group or a vinyl group, motivated by the desire to generate the polysiloxane with the best properties, it would have been obvious to one of ordinary skill in the art to have formed various polysiloxanes of Nakashima et al, including those formed from the alkoxysilanes which include alkoxysilanes wherein R is hydrogen and X is hydrogen atom, a fluorine atom, an unfluorinated or fluorinated alkyl group of 1 to 4 carbon atoms, an aryl group or a vinyl group by routine experimentation with an expectation of success.

The examiner notes that the alkoxysilane wherein R is hydrogen and X is hydrogen atom, a fluorine atom, an unfluorinated or fluorinated alkyl group of 1 to 4 carbon atoms, an aryl group or a vinyl group of Nakashima et al is the same as the oxidized hydrosilane of the instant claims.

The limitation of the instant claim "(a) oxidized hydrosilane prepared by oxidizing hydrosilane oligomer represented by the following chemical formula (I) or cyclic hydrosilane oligomer represented by the following chemical formula 2, in the presence of water or alcohol" is a product-by-process limitation; even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.

The polysiloxane and alkoxysilane, wherein R is hydrogen and X is hydrogen atom, a fluorine atom, an unfluorinated or fluorinated alkyl group of 1 to 4 carbon atoms, an aryl group or a vinyl group of Nakashima et al serve as the organic silicate polymer and the oxidized hydrosilane of the instant claim respectively.

The steps a and b of Nakashima et al serve as the steps (i) and (ii) of the instant claim respectively.

The hydrolysed alkoxysilane units of Nakashima et al inherently undergo condensation with each other or with the silica units in the composition of the invention. (see col.4, lines 17-22).

Claims 4 and 19 are rejected because the limitations on which they depend are product-by-process limitations.

Claims 6 and 7 are rejected because the limitations on which they depend are optional .

Claim 20 is rejected because the limitations on which it depend are optional.

Regarding **claim 8**, Nakashima et al further teaches that the catalyst is preferably used in an amount of 0.001 to 1 mol, per mol of the alkoxysilane (col.6, lines 6-7).

Regarding **claim 9**, Nakashima et al further teaches that the reaction conditions (hydrolysis) are not limited; it is preferable that the reaction be performed at a temperature of more preferably 80°C or lower (col.6, lines 30-35) and exemplifies a temperature of 20°C (col.13, lines 10-15).

Response to Arguments

9. Applicant's arguments with respect to claims 1-9 have been considered but are moot in view of the new ground(s) of rejection.

10. WO 02/22710 (US 7,358,316) is included in the PTO 892 as a reference that relates to the invention of the applicants.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to OLATUNDE S. OJURONGBE whose telephone number is (571)270-3876. The examiner can normally be reached on Monday-Thursday, 7.15am-4.45pm, EST time, Alt Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on (571)272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

O.S.O.

/Margaret G. Moore/
Primary Examiner, Art Unit 1796

mgm
1/14/09